One line description of O3SO2AI product:
Total O_3, volcanic SO_2, and aerosol index from EPIC ultraviolet measurements

Brief Description of O3SO2AI:

The EPIC on DSCOVR located at Lagrange-1 point in the Sun-Earth system observes the sunlit face of the Earth at high temporal and high spatial resolution (12 to 22 sets hemispheric views per day at ~20 km x 20 km), from sunrise to sunset simultaneously. Determined from EPIC's ultraviolet (UV) measurements, the O3SO2AI product contains total vertical columns of O_3 and SO_2, surface reflectivity, and aerosol index (AI). The vertical SO_2 columns are retrieved only when large volcanic clouds are detected in the EPIC field of view. This product provides a unique synoptic perspective of O_3, volcanic clouds, and aerosols that is quite distinctive from observations from a LEO (lower Earth orbit) or a GEO (geostationary Earth orbit) platform, allowing new studies of the dynamic and composition of the Earth atmosphere.

The O3SO2AI product is generated using the DVCF (direct vertical column fitting) algorithm to provide best estimates of atmospheric gases columns. Product validation by comparing EPIC total O_3 with MERRA-2 O_3 (assimilated products from Aura MLS and OMI O_3) demonstrates that the accuracy of the EPIC O_3 is better than 2%. Comparisons between total SO_2 mass between DSCOVR EPIC and SNPP OMPS from large volcanic eruption show that agreement between these two independent observations of the same events usually agrees to within 25%.